REMARKS

The Office Action mailed August 18, 2006 has been received and reviewed. All pending claims stand rejected. Claim 10 is proposed to be amended. Support for the amendment may be found throughout the as-filed specification, such as on page 16, lines 10-21. No new matter has been entered. Reconsideration is respectfully requested.

1. Interview

Applicants thank the Examiners for the courtesy extended during the interview conducted on August 3, 2005. Applicants appreciate the Examiners' helpful comments. As indicated in the Interview Summary, the substance of the interview is substantially as follows:

> "Applicants presented a proposed amendment in response to the final rejection. Applicants pointed out the cited references are directed to production of regular IBDV which can replicate in the transfection cells. Unlike IBDV, however, vvIBDV is not able to infect/replicate in CEF, Vero, or QM15 cells after transfection and needed to be rescued by permissive cell after transfecting CEF, Vero, or QM15 cell. Applicants also pointed out that Lim et al. were unable to produce an infectious vvIBDV isolate using the unmodified cNDA of the HK46 isolate (Specification, paragraph 007). Applicants are going to put the argument in response to final rejection."

Applicants believes the foregoing description provided by the Examiners and agreed to by applicants' representative, taken with the comments contained with the remainder of this response, adequately sets forth the substance of the interview. *M.P.E.P. § 713.04.* If further comments are deemed necessary or helpful, the Office is kindly requested to contact applicants' undersigned attorney who will promptly provide any further detail desired.

2. 35 U.S.C. § 103(a) rejections

Claims 21 through 27, 31, and 38 through 40 stand rejected under 35 U.S.C. § 103(a) as allegedly being obvious over Vakharia *et al.* (U.S. Patent 5,871,744) (hereinafter "Vakharia"), Mundt (1999), and Muller *et al.* (1982) (hereinafter "Muller"). The Examiner asserts that "the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must

be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art." *Final Office Action mailed August 18, 2006, page 3.* Based on the Office Action Summary, applicants will treat the rejection as applying to claims 10, 12 through 18, 21, 22, and 31. Applicants respectfully traverse these rejections.

Applicants submit that the cited references are directed to production of regular IBDV which can replicate in transfection cells. It is known in the art that transfecting cells with cDNA is performed on cell cultures of cells of non-Bursal origin like for example CEF cells or VERO cells or QM cells (Vakharia). The prior art teaches that vvIBDV cannot be usefully replicated in these cells normally used for transfection.

The prior art teaches that very virulent IBDV strains cannot be propagated in cell culture on cells that are of non-Bursal origin without losing their very virulent nature (Specification page 6, line 33 to page 7, line 5; Yamaguchi *et al.*, 1996). Vakharia even combines the VP2 of CEF adapted IBDV with other strains to make sure that the chimeric virus is propagated on the CEF cell culture. Therefore, recombinant IBDV strains produced in cell cultures are adapted and less virulent. Mundt also used a propagation step with CEO cell cultures. Adaptation of these virus strains to cells of non-Bursal origin, such as CEF cells or QM cells, changes the very virulent nature of the vvIBDV strain to a less virulent strain (Specification, page 7, lines 2-18 and page 12, line 36 to page 13, line 3). Applicants note that Lim *et al.* were unable to produce a recombinant infectious vvIBDV isolate using the unmodified cDNA of the HK46 isolate (Lim *et al.*, 1999). vvIBDV needs to be rescued from non-bursal cells by transfection into permissive cells.

Claim 10 has been amended to make clear that the recombinant vvIBDV does not infect the first cell or culture medium, and that the vvIBDV retains its virulent character after incubating in the first cell. Claim 10 has been further amended to make clear that the recombinant vvIBDV is rescued from the first cell or culture medium. It is a contribution of the present invention that recovery of truly very virulent IBDV progeny virus from cell culture cells such as CEF or VERO or QM cells is made possible by transferring supernatant of the transfected CEF, VERO, or QM cells to cells of Bursal origin for propagation. The claimed method enables, for the first time, the rescue of recombinant very virulent IBDV. The invention

further provides methods to modify the virulence of the vvIBDV without affecting the VP2 region, *i.e.*, without adapting the virus to non-Bursal cells such as CEF, VERO, or QM cells.

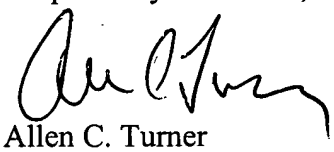
None of the cited references discloses or even hints at the combined method of transfection of vvIBDV-non-permissive cells with vvIBDV genome, subsequent rescue of progeny virus, and propagation in vvIBDV-permissive cells. Therefore, a skilled person with knowledge of the prior art would not and could not achieve the presently claimed method.

In view of the foregoing, it is respectfully submitted that the obviousness rejections should be withdrawn.

Applicants request entry of the proposed amendment to claim 10 as the amendment does not result in a need for any additional searches and should place the application in condition for allowance.

If questions remain after consideration of the foregoing, the Office is kindly requested to contact applicants' attorney at the address or telephone number given herein.

Respectfully submitted,



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